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Superstar to Superhuman: Scarlett Johansson, an 'Ideal' Embodiment of the Posthuman Female in Science Fiction and Media?

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ABSTRACT
From 2013 to 2017, Hollywood actor Scarlett Johansson was the star vehicle in four unrelated science fiction films that saw her portray a posthuman female enabled by artificially intelligent technology. As such technologies become ever more ubiquitous in the world, so too are the burgeoning discourses around posthumanism and artificial intelligence, which are predominantly disseminated to non-specialists through science fiction and journalistic media. These discourses hold the power to influence our perceptions of incoming technological advancements. Therefore, it is important to gain an interdisciplinary understanding of these discourses and their intersections in order to contribute to the cultivation of a general population that is technologically literate and empowered, as well as foster productive dialogues between specialists from within and across the sciences and humanities fields. The media's configuration of Scarlett Johansson as an 'exceptional' woman, often by drawing upon the lexicon of science fiction, has initiated underlying connections between the actor and posthuman figures within the genre, contributing to her perceived suitability for such roles. Despite appearing to be the 'ideal' candidate for posthuman female roles, Johansson's repeated casting poses several problematic implications, particularly when taken into consideration through a feminist lens. Not only does it contribute to an agenda that establishes improbable conceptions of how artificial, posthuman entities should look and behave, but it also perpetuates retrograde notions of gender roles.

KEYWORDS
artificial intelligence, posthumanism, science fiction and communication, gender representation, celebrity studies

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INTRODUCTION

As technology becomes ever more ubiquitous in the world and our individual day-to-day lives, so too are the burgeoning discourses around posthumanism, which are predominantly

communicated to non-specialists through science fiction and journalistic media. These discourses bear the power to significantly influence our perceptions of incoming technological advancements and how they may affect us as humans. Therefore, it is important to foster interdisciplinary understandings of these discourses, their intersections and how they can be developed in order to contribute to the cultivation of a general public that is technology literate and empowered by the pervasiveness of new technology in wider culture.

According to Francesca Ferrando (2019, p. 1), 'posthuman' has become a key concept in the contemporary academic debate to cope with the urgency for an integral redefinition of the notion of 'human' following the onto-epistemological, as well as scientific and bio-technological developments of the twentieth and twenty-first centuries. The philosophical landscape which has since developed includes several movements and schools of thought (Ferrando 2019, p. 1). As such, 'posthumanism' as a philosophy evades precise definition, an ambiguity that also extends to notions of the posthuman entity. Although it is not within the scope of this article to work towards establishing a comprehensive definition of posthumanism, it is necessary to outline what I will consider to constitute a posthuman entity within this commentary, determined by my coalescence of two broad considerations emergent from the disciplines of posthuman philosophy and science fiction studies. Respectively, these considerations are from Ferrando (2012, p. 10) who indicates that a posthuman entity can be any "non-human life: from animals to artificial intelligence, from aliens to other forms of hypothetical entities related to the physics notion of a multiverse". To this, Paul di Fillipo (2012, pp. 156-172) adds that the posthuman "posits a radical transformation of humanity into shapes unknown, possessing powers unimaginable", existing, in essence, "beyond the human baseline". As such, within this article, the notion of the 'posthuman entity' is varied but considered to include aliens, artificial intelligence, cyborgs and humans with special powers.

Between 2013 to 2017, Hollywood actor Scarlett Johansson was the star vehicle in four unrelated science fiction films that saw her portray a posthuman female who is, in some way, enabled by futuristic, artificially intelligent technology. The first of these films was Jonathan Glazer's *Under the Skin* (2013), an adaptation of Michel Faber's novel of the same name, originally published in 2000. In the film, Johansson is credited as 'The Female', a synthetic extraterrestrial on a mission to Earth to harvest male human flesh. Within the same year, Johansson also provided the voice for the sentient, disembodied operating system Samantha in Spike Jonze's Academy Award-winning *Her* (2013). In 2014, Johansson starred in Luc Besson's *Lucy* (2014) as a woman who acquires superhuman abilities after absorbing a large quantity of a synthetic nootropic drug named CPH4. Finally, in 2017, Johansson

played Major Motoko Kusanagi in Rupert Sanders' live-action adaptation of Masamune Shirow's manga comic series *Ghost in the Shell* (1989-1990). After a fatal accident, Major's brain is implanted into an artificial, giving her superhuman, cyborgian abilities whilst disassociating her from her human memories. Outside of these four films, Johansson has also become known for her performances as superhero Black Widow in *Marvel*'s Cinematic Universe. Subsequent to these performances, Johansson has been lauded as an 'ideal' embodiment of the posthuman female in contemporary science fiction. As online platform *Medium* contends, "Like John Cusack in adolescent/young adult rom-coms or Meg Ryan in adult rom-coms or Arnold Schwarzenegger in action blockbusters, there are a host of things that make Johansson a natural fit for science fiction" (McPherson 2014).

The aim of this article is to examine how and why Scarlett Johansson has come to be recognised as an 'ideal' embodiment of the posthuman female and the potential implications of her repeated casting in these roles on the general public's perceptions of new technology and notions of the posthuman. The first section of this article builds upon a reading of stardom originally put forward by Violette Morin in the 1960s and popularised by Richard Dyer which argues that celebrities "seem to be of a different order of being" (Morin 2012; Dyer 2011, p. 43). By drawing upon theory from star studies, I demonstrate how the media discourse surrounding Johansson has contributed to a framing of her stardom as significantly defined by an exceptional physical attractiveness. Developing this idea further, I argue that Johansson's exceptionality draws parallels with science fiction's and other fantasy genres' figurations of various posthuman entities, who are literally ontologically different from baseline human beings, mostly in ways that are considered superlative. These parallels between Johansson and the posthuman figure as extraordinary are illustrated by the media's adoption of science fiction's lexicon in reference to Johansson, which I suggest has, in part, initiated the perceived elevated suitability of the actor for roles as posthuman females. Following this, I demonstrate how Johansson's exceptionality is drawn upon within *Under the Skin* (2013), *Her* (2013), *Lucy* (2014) and *Ghost in the Shell* (2017) to convey the posthuman nature of the characters that she portrays.

The second section of this article considers the problematic implications of Johansson's repeated casting as posthuman females in science fiction cinema, particularly in terms of their representation of gender. In their objectification of Johansson's characters, who are also manipulated and controlled by men, I contend that *Under the Skin* (2013), *Her* (2013), *Lucy* (2014) and *Ghost in the Shell* (2017) are contributing to the establishment of improbable conceptions of how posthuman, particularly artificial, entities should look and behave that also perpetuate retrograde notions of gender harmful to women. I underscore this argument with reference to the real-world development of a robot created in Johansson's image by an

amateur roboticist Ricky Ma and the subsequent publishing of his step-by-step guide to building one's own artificial version of the actor. This highlights the influence that the media and science fiction can have on the development of actual technologies and wider perceptions of the posthuman.

THE 'EXCEPTIONALITY' OF SCARLETT JOHANSSON

In 2014, author Katherine Hill wrote a short story titled 'Scarlett' for *The Literary Review*. The story explores the cultural fascination with Scarlett Johansson as its narrator, Charlotte, gradually transforms into the actor after learning of her own boyfriend's obsession with Scarlett Johansson's voice and looks. Charlotte's boyfriend would close his eyes and imagine that her low voice belonged to Scarlett Johansson, only to be disappointed when he opened them to find Charlotte still standing there. Eventually, Charlotte finds herself assuming Scarlett Johansson's name, not only amongst her boyfriend and friends but also on bills and credit cards, and finally, she begins to attend film premieres and interviews as though she were the actor (Hill 2014, pp. 112-114). Hill's fictional story speaks to Johansson's wide desirability within contemporary culture, presenting a literalised scenario whereby men want to be with her and women want to be her.

Indeed, since the early 2000s, a similar discourse has permeated the media's commentary about Johansson, contributing to the elevation of her star persona as an actor who is extraordinarily attractive and sexually desirable. This is demonstrated by Johansson's frequent appearances within several well-known, and now defunct, editorial lists that annually ranked the attractiveness of female celebrities: In 2010, Johansson was *GQ* magazine's 'Babe of the Year'; she was the only woman named as *Esquire* magazine's 'Sexiest Woman Alive' twice; and since 2006, she featured in the top ten of *FHM*'s '100 Sexiest Women' list no less than six times. Elsewhere, Anthony Lane (2014), writing a profile for Johansson in *The New Yorker,* ardently defends the actor's exceptional physical presence as a central aspect to her star persona and performances:

> Why should we watch Johansson with any more attention than we pay to other actors? When did moviegoers come to realize that she was worth the wait, in gold? Well, there was Woody Allen's *Vicky Cristina Barcelona* (2008), which was loaded with physical gorgeousness, and lit with suitable fervor. There was one scene, at a champagne reception in a Spanish art gallery, where Johansson was, indeed, gilded to behold. She seemed to be *made* from champagne (Lane 2014, original emphasis).

However, for *The Telegraph* film critic, Tim Robey (2010), Johansson was "so obviously there

to up the film's booty quotient [*Iron Man 2*, 2010] she gets nothing to do but pout". Despite his more critical perspective on Johannsson's first performance as superhero Black Widow, Robey continues to emphasise her body and its parts as something attractive for audiences to behold.

Particularly within the film industry, exceptional attractiveness is a valuable commodity and held in high regard. As Martin Shingler (2012, p. 3) articulates, film stars are "objects of beauty and physical perfection", providing audiences with feelings of "pleasure", "admiration" and "fascination". To this, Shingler (2012, p. 66) adds that film stars often possess similar qualities that are contributory to their level of success, "most notably, charisma, expressivity, photogenic looks, mellifluous voice, attractive bodies, fashion sense and style". These star qualities are mostly concerned with physicality and the way the body is presented. Similarly, Jeanine Basinger (2007, p. 3) leads her work with the contention that "a star has exceptional looks", a statement that literally precedes their "outstanding talent". Considering this at a base level, Johansson's physical appearance, which is frequently framed as exceptional within media discourse, contributes to the qualification of Johansson as a 'star', as 'something' more than an actor, and therefore a highly desirable and financially obvious choice for any filmmaker working within any genre. Indeed, Johansson is recognised as one of the most bankable female actors in contemporary Western culture. In 2019, she was named by *Forbes* as highest-paid female actor for that year and was also announced as the highest-grossing female actor of all time (Berg 2019; Donofrio 2019).

Taking these notions of stardom further, the media's discourse about Johansson and her physical exceptionality has also contributed to more specific notions of the actor as the 'ideal' embodiment of the posthuman female in contemporary science fiction cinema. This is significantly emergent from the media's adoption of science fiction's language and imagery in discussion of Johansson, drawing connections between the star and the posthuman figure. Richard Dyer (2011, p. 43) articulates that, "stars are always the most something-or-other in the world – the most beautiful, the most expensive, the most sexy. But because stars are "dissolved" into this superlative, are indistinguishable from it, they become superlative, hence they seem to be of a different order of being, a different 'ontological category'". Similarly, within science fiction, posthuman entities are literally figured as bearing ontological, often superlative differences to human beings. For instance, in James Cameron's *Avatar* (2009), the alien Na'vi species are beautifully statuesque and ethereal; in *Marvel*'s Cinematic Universe, superheroes are the fastest, strongest and most agile beings with extraordinary powers; and in narratives like Alex Garland's *Ex Machina* (2014), artificially intelligent robots have super intelligence and perfectly sculpted mechanical bodies. Therefore, the media's persistent framing of Johansson as 'exceptionally

desirable' functions to figure the actor as being of a different order of attractiveness, as being 'physically superlative' and 'exceptional'. Johansson is, to draw upon di Fillipo's aforementioned phrasing in reference to the posthuman figure in science fiction, perceived as "beyond the human baseline" in terms of physical attractiveness (2012, p. 156).

Moreover, the media's use of science fiction's language and imagery within the commentary about Johansson reaches out beyond the application of the word 'star' and appeared within the discourse about the actor even before she became known for posthuman roles. For instance, in an interview with Johansson for *The Times* published in 2008, Johansson is described as possessing "starlet" and "luminous" looks in addition to a "meteoric" rise in the public eye (Palmer 2008). Similarly, Roger Ebert's review of romantic comedy *In Good Company* (2004) describes Johansson as having a "gravitational pull of quiet fascination […] she creates a zone of her own importance into which men are drawn not so much by lust as by the feeling that she knows something about life that they might be able to learn" (Ebert 2005). This calls to mind science fiction imagery, as though Johansson were an otherworldly entity with the answers to humanity's unknown questions about the universe. Elsewhere, when *Esquire* magazine awarded Johansson their 'Sexiest Woman Alive' title for a second time, Tom Chiarella (2013) described the actor as an "ascendant beauty". Indeed, within a commentary on the "whiteness" and "auratic" qualities of Johansson's advertising campaigns for fashion designer Dolce and Gabbana, the celebrity studies scholar, Sean Redmond (2019, pp. 52-53), contends that the ethereal images produced of Johansson attach superlative connotations with the "heavenly" to the star and therefore, frame her as a "highly desirable representation that appears to be not of this world or rather – to draw on the lexicon of science fiction – out of this world". Redmond (2019, pp. 52-53) even goes so far as to say that Johansson has "come to embody an alien and alienating form of whiteness".

Consequently, *Under the Skin* (2013)*, Her* (2013)*, Lucy* (2014) and *Ghost in the Shell* (2017) utilise notions of Johansson's perceived exceptionality to convey the extraordinariness of the posthuman characters that she portrays within these films. In *Under the Skin* (2013)*,* this emerges from the locale of the film and, therefore, the locale of Johansson and her character The Female. Set in rural Scotland, the film's depiction of The Female, a predatory, synthetic extraterrestrial effectively in disguise as Hollywood actor Scarlett Johansson and scouting for male humans in a white van (reversing some of the 'white van man' stereotypes) seems so incongruous and therefore extraordinary that it is jarring to behold at times. The banality of the Scottish landscape juxtaposes with the audience's knowledge that The Female is otherworldly. However, her otherworldliness is not distinguished by science fiction's conventional use of visual effects but rather through the world-famous Johansson's portrayal of her, who too appears misplaced within this rural context. Jonathan Glazer, the film's

director, alludes to this in the film's production notes, "The incongruity of Scarlett Johansson in Glasgow – you're already in alien territory" (FilmNation Entertainment 2013, p. 5).

Within *Her,* however, extraordinariness emerges from Johansson's unconventionally invisible yet palpable performance as the sentient disembodied operating system Samantha. To draw upon Michel Chion's work on filmic voices (1999, p. 18), Samantha is an 'acousmatic' character in that she is heard but not seen by the audience nor the other characters within the film. Chion (1999, pp. 21-24) argues that an acousmatic presence is a "special being" that possesses four powers, "ubiquity, panopticism, omniscience, and omnipotence". Indeed, as *Her* (2013) reveals, Samantha's voice is not only available to Theodore but also a number of other users of the OS; Samantha can also see the worlds around these individual users and beyond, and her expanding capacity for knowledge is an indicator of her overall computational power. But, further to this, Samantha's voice functions as a power itself, in its ability to evoke a corporeality and tangibility, despite her lack of physical form. This, in part, is due to the 'grain' of Johansson's voice, the grain being, as Roland Barthes (1990, p. 66) explains, "an erotic mixture of timbre and language, and can therefore also be, along with diction, the substance of an art". In other words, "the 'grain' is the body in the voice as it sings" (Barthes 1977, p. 188). Johansson's recognisable husky and breathy vocal tones are, as Christine Cornea (2007, p. 159) has considered with regards to other female voices in science fiction film, "highly suggestive of bodily involvement in the speaking process. The expiration of breath acts as a reminder of the breathing apparatus that lies below the neck/head, inside the body". Similarly, Laura Tunbridge (2016, p. 139) describes Samantha's voice as "haptic" in that it "conveys a sense of physical proximity". Indeed, for the most part, Samantha's human love-interest Theodore (Joaquin Phoenix), whose estrangement from his wife becomes indicative of his inability to connect with human women, often marvels in disbelief at the level of intimacy he experiences with disembodied Samantha. This is underscored by the closeness of Samantha's voice in Theodore's ears through wireless headphones as they engage in pillow talk. Moreover, although Samantha's voice is never synchronised with the body of Johansson in the film, its recognisability teases the audience and invites them to visualise Johansson instead. As Kaja Silverman (1988, p. 49) articulates of other disembodied, female voice-overs in Hollywood film, she may escape the viewer's gaze, yet "her appearance is a frequent topic of conversation" rendering her curiously corporeal and diegetic. Therefore, Samantha's voice is not completely divorceable from Johansson's body, further highlighting the exceptionality and power of Johansson's celebrity.

Furthermore, through Johansson's star vehicle casting within *Lucy* (2014) and *Ghost in the Shell* (2017) – which are both set in futuristic Asian landscapes signalling the continued

prevalence of techno-orientalism within Western science fiction – the lone white American woman is figured literally as an exception, complementing her possession of a technologically enhanced body capable of extraordinary feats. Techno-orientalism is defined by David S. Roh, Betsy Huang and Greta A. Niu (2015, p. 2) as, "the phenomenon of imagining Asia and Asians in hypo- or hypertechnological terms in cultural productions and political discourse". Techno-orientalist discourses often give rise to a number of Western stereotypes of Asian people and culture, in addition to referencing competitive relations between the West and the East that are, in part, grounded in the "project of modernity – cultures privilege modernity and fear losing their perceived "edge" over others" (Roh et al. 2015, p. 3). These dehumanising stereotypes include but are not limited to notions of "the Asian body as a form of expendable technology" and of Asian people as "unfeeling, efficient and inhuman" or as "mindless workers" or "sinister agents" (Roh et al. 2015, p. 11). Within *Lucy* (2014) and *Ghost in the Shell* (2017), these stereotypes are reflected by Johansson's characters who are pitted against criminal groups of Asian men intent on killing them both, few of whom seem to have any discernible individual identities. This is underscored in *Lucy* (2014) by the collective acknowledgement of these characters as "Jang's men" in the film's end credits and in *Ghost in the Shell* (2017) by their identical black suits and dark glasses that obscure their faces. Lucy and Major overcome these adversaries with ease: In *Lucy* (2014), the titular character's newly acquired ability to control the matter around her sees her opponents' otherwise adept use of martial arts rendered ineffectual as they float around her flailing their limbs; in *Ghost in the Shell* (2017), Major's own mastery of martial arts sees her defy gravity to defeat six men standing idly with guns. In either case, however, Asian people are derisively figured as primitive in comparison to the advanced and extraordinary white woman, with both films effectively caricaturing combat practices rooted in Asian cultures. Contrary to the science fiction trope of the "ethnic" alien" who is "often placed in opposition to white communities […] what we find through the science fiction films that Johansson stars in is idealised whiteness being the alienating force, albeit within narratives that ultimately privilege her and her idealisation" (Redmond 2019, p. 55). Indeed, this problematic framing of Johansson and her characters within *Lucy* (2014) and *Ghost in the Shell* (2017) works to conflate exceptionality as exclusive to whiteness, whilst appropriating Asian culture and marginalising Asian people within their native landscapes.

POTENTIAL IMPLICATIONS OF JOHANSSON'S POSTHUMAN PERFORMANCES

Having demonstrated how Johansson has come to be recognised as a suitable actor to portray posthuman females in contemporary science fiction cinema, it is also necessary to consider the implications of her repeated star vehicle performances in such films, which can be regarded as problematic, particularly in terms of their representations of gender.

However, as previously highlighted, not only does the media consider Johansson as suitable to play posthuman roles, but she is also seemingly considered as an 'ideal' embodiment of them. To illustrate this further, the science magazine *Discover* contends that Johansson is the "cyborg that Hollywood deserves", with online publication *Screen Crush* adding that "Scarlett Johansson's superpower is the ability to make sci-fi more interesting" (Hsu 2016; Hayes 2014). Elsewhere, *The Guardian* describes Johansson as the "charismatic queen of science fiction", "our favourite space invader" and "enshrined as perhaps the leading sci-fi action star of her generation", whilst *Forbes* asserts that "when considering who to cast as a sexy-but-lethal cyborg, it's hard to think of anybody else but Scarlett Johansson" (Thorpe 2017; di Placido 2016).

Indeed, through a hegemonic patriarchal lens, Johansson can be regarded as an 'ideal' embodiment of the posthuman female in contemporary science fiction cinema – Johansson has proven to be more than an adequate fulfilment of male fantasies about women as a number of aforementioned magazine publications predominantly aimed at male audiences have demonstrated in their ranking of Johansson's attractiveness. Julie Wosk (2015, pp. 3-5), who has written extensively on artificial females in culture, explains that men have long had fantasies about "sexually compliant women" or producing "a custom-made […] artificial female superior to the real thing", beginning with the Ancient Greek myth of Pygmalion in which a sculptor creates his image of a beautiful woman that is then brought to life. By actively participating in the patriarchal celebration of her own sex symbol status through feature interviews and photoshoots accompanying the many accolades relating to her exceptional attractiveness emergent from men's magazine publications, Johansson is, arguably, complying with the sexualised objectification of her 'ideal' body. Furthermore, Johansson's status as an actor draws parallels with Wosk's notions of the artificial female as a superior, custom-made object (Wosk 2015). Johansson's career in Hollywood has mostly involved portraying female characters emergent from the imaginations of mostly male filmmakers. To embody their visions, Johansson is required to be malleable and adaptable, by changing her style, appearance and even her voice (as in *Under the Skin* (2013) in which Johansson adopts a British accent). This draws further connections between Johansson, the film star, and the posthuman, artificial female.

Yet, when considered from a feminist perspective, Johansson's castings within *Under the Skin* (2013), *Her* (2013), *Lucy* (2014) and *Ghost in the Shell* (2017) as posthuman artificial females read as denigrations of women and reinforcements of retrograde gender roles and stereotypes. As Joanna Zylinska and Sarah Kember (2012, pp. 106-107) articulate within their exploration of real-world gendered ambient artificial intelligence in the home, "predictable gender patterns are embedded in the majority of technofuturist visions […] future-oriented

visions are normative and strangely regressive". Johansson's posthuman characters demonstrate that similar notions can be extended to contemporary science fiction cinema, foremostly evidenced in the repeated sexual objectification of Johansson and the characters that she portrays in *Under the Skin* (2013), *Lucy* (2014), *Her* (2013) and *Ghost in the Shell* (2017). As has often been the case with science fiction, the potential for progressive gender representations that subvert the hegemonic order are sidestepped within Johansson's cycle of science fiction films (Kac-Vergne 2018, p. 2).

Within all four of Johansson's star vehicle science fiction films, Johansson portrays posthuman females literally figured as objects. In *Under the Skin* (2013), The Female's body is formed of two parts, a synthetic human suit and its extraterrestrial form underneath. Moreover, her body becomes a predatory trap, a key component to her capturing of her male prey. In *Lucy* (2014), Lucy is literally used as a vessel to transport the CPH4 drug, and her subsequent absorption of this drug causes her body to transform into what can only be likened to a mass of entangled wires. Although Samantha is disembodied within *Her* (2013), Samantha's voice emanates from a pocket-sized device resembling a vintage cigarette case or compact mirror. Therefore, Samantha is a portable object; she can be held, accessed and transported with ease by her end user Theodore. In *Ghost in the Shell* (2017), Major Motoko Kusanagi is considered by the company that created her artificial body as a weapon to be used against terrorists. Although Johansson's characters in these films possess incredible abilities beyond those of any human, which could be read as a figuration of female strength and power; their framing as objects and their gendering as female functions double to underscore the posthuman and the female form as something that is less than human. A similar argument is made by Victoria Flanagan (2017, p. 33), who articulates that posthumanism has become particularly relevant to women and girls because, like the posthuman figure, their bodies have often been framed as strange and as a sign of otherness.

Additionally, *Under the Skin* (2013) and *Ghost in the Shell* (2017) seem to exploit the 'knownness' of Johansson and her image as an exceptionally attractive sex symbol by frequently displaying her body by way of further communicating to the audience the extraordinariness of their respective posthuman females. As Laura Mulvey (1990, p. 33) argues, women's subordinate positioning in film connotes "to-be-looked-at-ness" with their "visual presence tend[ing] to work against the development of a storyline, to freeze the flow of action in moments of erotic contemplation". Within *Under the Skin* (2013) and *Ghost in the Shell* (2017), Johansson's sexually objectified body is indulgently displayed and literally slows the pace of the action. In the former film, there are several highly eroticised scenes that depict The Female's body as a sexual, predatory tool used to lure her male victims who

are evidently attracted to her. These scenes are drawn-out in length, feature minimal cuts and are overwhelmingly concentrated on Johansson's near-nude body. In addition, the vacuous, black backdrop within these scenes as well as the use of non-actors who play her male victims inhibit distractions from the flawless, pale complexion of the film's star, Scarlett Johansson. These scenes effectively function as a strip tease, whereby Johansson slowly removes her clothes down to her underwear and seductively walks away from her entranced victims in synchronisation with Mica Levy's soundtrack, which has been described by *Sight & Sound* magazine as "sexual and slinky" (Romney 2014). The camera slowly pans along the entire length of Johansson's body, inviting the audience, as well as her victims, to fully consume and overindulge in the erotic spectacle. Lieke Hettinga (2016, p. 20) has read Johansson's performance in *Under the Skin* (2013) in a similar way, stating that the actor "dominates with her enchanting screen presence, demanding the viewer's attention".

Likewise, *Ghost in the Shell* (2017) also uses drawn-out shots that gratuitously linger on Johansson's body, which is styled as Major in a skin-tight, flesh-coloured bodysuit giving an initial impression of nudity and emphasises the contours of Johansson's feminine shape. In an interview promoting *Ghost in the Shell*'s release (2017), Johansson described the bodysuit as a "second skin" that "allows [Major] to become invisible" (Entertainment Tonight 2017). Although the bodysuit bears the power of concealment, the viewer's attention is, ironically, further drawn to Johansson's body as Major because of the initial impression of nudity. The bodysuit is first shown in the opening scenes of the film in which Major is on a mission to neutralise a terror threat in a nearby hotel. As she stands at the top of a skyscraper building, Major removes her floor-length coat, revealing the bodysuit, and proceeds to perform a backwards dive off the building. The film uses a slow-motion effect to linger on the display of Johansson's taut physique, and three separate shots from different angles function to showcase specific parts of her feminine body, notably her face, breasts and backside. This slow-motion sequence obtrusively disrupts the narrative and the ongoing action taking place within the hotel where several gunmen have opened fire at a business conference for Hanka Robotics, the company that created Major.

Lucy (2014), however, exploits the knownness of Johansson's body in a different way, using its idealised attractiveness as a measure for Lucy's normalcy after she consumes a large amount of the synthetic nootropic drug CPH4. In the beginning of the film, Lucy is framed as a classic American beauty; and, typically Johansson, she is blonde, beautiful and vivacious. Once she is forcibly impregnated with CPH4 by gangster Mr Jang and his associates – which sees her literally become an object subjected to violent sexual assault – Johansson's body is used to frame Lucy in a way that is physically altering, even deteriorating. Firstly, Lucy now bears a bloody wound across her abdomen. The male surgeon who performed the

procedure tells Lucy that the scar will soon heal, so she can show off her body on the beach in the summer. His patronising assumption is that Lucy's foremost concern will be how her body will look to others, a sexually objectifying statement that positions the female character as highly superficial. After Lucy is beaten by Mr Jang's associates causing the CPH4 to leak into her system, Lucy's intelligence grows exponentially; however, this also leads to the physical breakdown of her body. Onboard a flight to Paris, Lucy sips champagne whilst using her newfound mind control ability on the flight attendants and impressively using her hands to type on two laptops while raising a toast, "To knowledge". Soon after, Lucy's teeth fall out and the skin peels from her face, which also begins to significantly droop. Until Lucy is able to consume more CPH4 on the flight, she appears as grotesque, even monstrous, and a far cry from Johansson's usual look. Here, this scene reads as a statement on female attractiveness as incompatible with intellect, and one has to question whether this emphasis on physical attractiveness within *Lucy* (2014) would be anywhere near as prominent if the central character were male. Whilst Lucy is permitted this high level of intellect and a number of superhuman powers, this is at the cost of her physical deterioration into monstrousness, eventually having to shed her physical body completely when the CPH4 causes her cerebral capacity to reach its full potential. To an extent, this perpetuates a stereotypical gender dichotomy whereby beauty is perceived as a female quality and associated with a lack of intelligence, and intelligence is a male quality associated with a lack of attractiveness (Richardson 2015a, p. 79).

Initially, it would seem that *Her* (2013) operates in a different way to Johansson's other star vehicle science fiction films due to the actor's physical absence from the narrative. Yet, as Christy Tidwell (2018, p. 24) explains, "despite Samantha's lack of a body, Johansson's body remains present, and it cannot be separate from her star persona. This drives home, once again, the centrality of the female AI as an object of desire". As previously mentioned, it is the very absence of Johansson's body within *Her* (2013) that becomes a central aspect of the film. Moreover, Samantha's disembodiment enables the film's sexual objectification of other human female characters. For instance, when Samantha and her end user, Theodore, become romantically involved, Samantha hires a sex surrogate to compensate for her lack and to help them experience a version of sexual intimacy. When the surrogate arrives at Theodore's home, she is mute and gestures for Theodore to give her an earpiece, microphone and camera, which she attaches to her body. This is a further indication of her own status as an object. Samantha then uses the surrogate's body as though it were her own, instructing her to embrace Theodore, and Samantha can be heard asking him about his day through the surrogate's microphone. As the situation becomes more intimate, Theodore removes the surrogate's clothes but then announces his own uneasiness with the situation. The surrogate cries and leaves in a cab, but not before telling Theodore and Samantha that she just wanted

to be "a part" of their relationship, underscoring her status as an object. Within *Her*'s fictional but familiar, technology-powered world, 'human' women are disturbingly and humiliatingly reduced to sexual aids to ease the complications between men and their artificial female companions. However, sentient artificial entities, like Samantha, are also reduced to performing gender and relationships with humans, potentially contributing to establishing dangerous perceptions and stereotypes of how artificial intelligence technologies should look and behave, and its possible applications for humans.

Despite the (sexual) objectification of Johansson's posthuman characters within *Under the Skin* (2013), *Her* (2013), *Lucy* (2014) and *Ghost in the Shell* (2017), it would, at first glance, seem to be unfair to classify these characters as passive females. Both Lucy and Major are combative and central to the action within their respective films; The Female actively pursues and captures her victims in *Under the Skin* (2013); and Samantha is not only the instigator of the arrangement with the sex surrogate, but she also develops independent interests and other relationships away from Theodore in *Her*. However, upon closer analysis of these films, it is evident that Johansson's characters are manipulated and controlled by men. As Malcolm Matthews (2018, p. 167) has argued of these films, they "employ Johansson in the service of an illusion of female empowerment".

In *Under the Skin* (2013), The Female initially seems to be figured as an autonomous, emasculating predator. That is until it is revealed that she is controlled by an ominous, patriarchal figure riding a motorcycle, who is presumed to be of the same extraterrestrial origins as her. Known only as 'The Bad Man' within the credits, this character does not speak throughout the entire film, yet his aggressive body language towards The Female is indicative of his dominant power over her. For instance, shortly after disposing of one of her victims, The Bad Man visits The Female at the derelict farmhouse she has come to occupy. The Female stands perfectly still whilst The Bad Man intensely stares at her. He circles her body as though examining it and intrusively leans in so that his face is just inches away from hers. The Female does not react to this behaviour, and the impression given is that she is being subjected to unspoken discipline from him. Abruptly, he turns away and leaves the farmhouse. From a viewer's perspective, it is strange to see this female character rendered passive, immobilised and at the mercy of something that, on the surface, appears to fit the criteria of her victims. Initially a narrative that subverts gender stereotypes by positioning The Female as a powerful predator and men as victims, *Under the Skin* (2013) reneges on this through the introduction of The Bad Man. Matthews (2018, p. 168) draws to a similar conclusion with regards to all of Johansson's posthuman characters, stating that they "personify a quasi-dismantling of gender hierarchies followed by their ultimate reformation". Indeed, this is further underscored within the conclusion of *Under the Skin* (2013) when The

Female totally abandons her predatory mission to harvest male humans and attempts to assimilate as a human woman, first by sampling human food, which makes her violently sick, and then by embarking on a sexual relationship with a man that soon fails. The Female's attempts at assimilation as a human female render her as vulnerable and reverse her previous power when she is sexually assaulted and murdered in secluded woodland by an unknown man who discovers her true extraterrestrial identity. These final scenes restore the previously disrupted hegemonic gender order by reinstating the male as a powerful, controlling predator and reducing The Female to a victim as she is burnt alive and left to crumble into a fragile pile of ash.

Similarly, within *Ghost in the Shell* (2017), Johansson's character, Major, is under the strict control of a man named Cutter (Peter Ferdinando), the CEO of Hanka Robotics, the company that developed Major's synthetic body. Despite undergoing significantly traumatic procedures to place Major's organic brain into her synthetic body, Cutter demands that she is set to work within Sector 9 as soon as she is operational. Cutter labels Major as a 'weapon', dismissing her humanity and denying her the opportunity to rehabilitate and fully come to terms with her new body. His patriarchal control over women is further underscored by his disregard of the expert recommendations of Dr Ouelet (Juliette Binoche), the female roboticist who created Major's body and who strongly advises against treating Major as a machine. Once Major is in operation within Sector 9, she is placed under the control of another man named Chief Daisuke Aramaki (Takeshi Kitano). Initially, Major appears to be rebellious towards his authority as she ignored his orders to hold off from entering a building where gunshots have been fired. However, by the end of the film, when Major has rediscovered her memories and sense of humanity, which were taken away from her by Hanka Robotics when she was given her new body, Major is not emancipated from her duties as a weapon as one may expect. Instead, the film concludes with Major embracing this role and continuing to work obediently under Arataki's instructions for a company that sought to remove her humanity completely and weaponise her.

The opening scenes of *Lucy* (2014) see Johansson's titular character manipulated by her latest boyfriend Richard (Pilou Asbæk) into delivering the briefcase containing the drug CPH4 to Mr Jang. Richard begins with gentle persuasion but eventually forcibly handcuffs Lucy to the case, leaving her with no other option than to deliver it. Masculine control continues to be exerted over Lucy when she delivers the briefcase as Mr Jang forces her to be a drug mule, surgically implanting a package of CPH4 into her abdomen without consent. Mr Jang's associates also beat and sexually assault Lucy. One of these assaults leads to the drug package leaking into Lucy's system which, in turn, leads her to acquire exceptional abilities such as mind and body control over others. Lucy uses this newfound ability to

torture and kill Mr Jang and those that hurt her. However, rather than framing Lucy's strength and autonomy in a positive light, the film figures it as dangerous and monstrous by depicting her as making irrational decisions to kill innocent people and without remorse. For instance, Lucy shoots a random taxi driver simply for not speaking English; and during a car chase, she causes several serious traffic collisions on Parisian streets bustling with pedestrians. Moreover, despite Lucy's absorption of a drug that has given her superhuman abilities, the film still frames Lucy as a damsel-in-distress-type character that requires the help of no less than two male figures. Firstly, there is Pierre Del Rio (Amr Waked), a French policeman who Lucy enlists to recover the remaining CPH4 packages from other drugs in Europe for her own consumption. The second of the male figures is Professor Samuel Norman, a revered neuroscientist who Lucy looks to as a source of guidance as her cerebral capacity rapidly expands. Further to the detriment of the representation of women in *Lucy* (2014) is the way in which the film concludes. Patriarchal control is restored, and the powerful female character is dispelled from the physical world. As Lucy rapidly heads towards a cerebral capacity of one hundred percent, she collects the entire knowledge and history of the universe, which she then downloads onto a USB drive and presents to Professor Norman and his entirely male team of scientists. Immediately after, Lucy disappears, and the impression given is that this male-led team will take the credit for Lucy's discoveries in her last moments of human life.

Drawing parallels with *Lucy* (2014), the film *Her* (2013) also initially presents Theodore as possessing knowledge and experience that gives him a degree of power over the sentient female operating system, Samantha. This is in addition to his godlike control over Samantha: As her primary end user, he is instrumental in the establishment of her identity answering questions about himself and his life that determine who Samantha is. Theodore also holds the ultimate power of switching Samantha on and off at whim. For example, soon after they are introduced, Theodore laughs at something Samantha says, and she asks him, "Was that funny?". Theodore answers affirmatively, and Samantha replies, "Oh good, I'm funny". Here, Theodore is framed as a tutor of sorts, possessing a knowledge and experience of humour that Samantha is yet to acquire. Samantha, then, is framed as his student; she is inexperienced, looking to learn and seeking Theodore's guidance and approval. After this, Samantha asks Theodore, "What do you need?", and the scene ends with Samantha dutifully reorganising Theodore's computer hard drive at his request.

Moreover, although Samantha is constantly evolving and her intellect rapidly surpassing Theodore's, which could be viewed as her growing empowerment, this is undermined by the notion that Samantha's overall purpose is to recuperate and restore Theodore's fragile masculinity. As Matthews (2018, p. 174) explains, Samantha comes to Theodore's aid after

his recent marital separation; she functions to empower him, and the "male is privileged at the expense of the female". Indeed, this privileging of Theodore at the expense of Samantha further emerges within *Her*'s concluding scenes, which sees Samantha transcend the physical world with the other operating systems of her kind, drawing significant parallels to the conclusions of *Under the Skin* (2013) and *Lucy* (2014). Although Samantha's freedom from Theodore's control is empowering for this female character, the film's erasure of the autonomous, enlightened female functions to undermine this sense of empowerment. This is further underscored by the film's recentring of phallocentric concerns, as Theodore scrambles to find another woman to take care of him – in this case, his long-term friend and former lover, Amy.

From the above analysis, it is evident that *Under the Skin* (2013), *Her* (2013), *Lucy* (2014) and *Ghost in the Shell* (2017) not only share Johansson as their star vehicle, but they also present posthuman female characters as less-than-human, sexualised objects that are controlled by a patriarchal male authority. Even when Johansson's characters achieve autonomy or empowerment, this is undermined by their figuration as dangerous or monstrous, or these characters are erased from the narrative's conclusions to make way for a restoration of phallocentric ideologies. By figuring these characters as posthuman, artificial and otherworldly, one may argue that they are not representations of women and, therefore, not detrimental to women. However, they have to be considered as such because they are portrayed by a woman and are figured using her human female form. As science fiction is one of the foremost ways that science and technology discourses are communicated to the general public films like *Under the Skin* (2013), *Her* (2013), *Lucy* (2014) and *Ghost in the Shell* (2017) have the potential to influence our perceptions of the posthuman – in these cases, figuring the posthuman as female and using these characters in ways that promote largely retrograde gender stereotypes. Johansson repeatedly taking up roles as posthuman females that continue to be oppressed by patriarchal culture is contributing to a dissemination of a discourse that establishes notions of how posthuman figures should look and behave, a discourse that is often reproduced by the media. The 'ideal' posthuman is female, exceptionally attractive, compliant and controllable – patriarchal expectations that 'human' women have already fought so hard against. This becomes increasingly problematic as we continue to make developments in the areas of cyborg technology and humanoid artificial intelligence. As Susan A. George (2008, p. 114) contends, science fiction films have often demonstrated "technology's role in sexist oppression". Indeed, what will actual new technologies look like and how will they behave if understandings and perceptions of them have been, in part, established by patriarchal science fiction narratives?

To some, this argument may seem overstated. However, the notion of Johansson as an 'ideal'

embodiment of the posthuman female has already permeated from science fiction into the media and even into the actual world. In 2016, amateur roboticist Ricky Ma unveiled Mark-1, a humanoid robot he built himself in his apartment over a period of 18 months at the cost of around £35,000. Although Ma stated that the creation was modelled on a Hollywood actress, he would not confirm who this was. However, Mark-1's blonde hair, large eyes, full lips and a freckle on its right cheek bear an unmistakable, uncanny likeness to Johansson. This was also the consensus amongst many media outlets who reported Ma's creation to the general public (see, for example, Horton 2016; Lo 2016; Bolton 2016; Redhead 2016). Ma has been interviewed by many media outlets across the globe, which often depict the amateur roboticist proudly showcasing his creation. In the third episode of web series *Machines with Brains*, created by news organisation Quartz, Ma shows the interviewer a room where he stores the various prototypes of Mark-1's face. All of the prototypes resemble Johansson, which draws parallels with one of the most disturbing scenes from Alex Garland's science fiction film *Ex Machina* (2014) when the sentient and synthetic Ava (Alicia Vikander) discovers a room full of discarded, fragmented and incomplete prototypes of female androids. Ma states, "I think the perfect robot, first and most importantly, has to look perfect", suggesting that he views Johansson's appearance as the 'ideal' look for his Mark-1 creation (Quartz 2017). Elsewhere, in an interview for Dazed, Ma reveals, "I love to find attractive and special characters from movies or TV for my robots", highlighting the significant role that fiction may play in real-world developments within technology and the development of humanoid robots (Kale 2016).

Despite Ma's insistence that Mark-1 is not built for use as a sex robot, the way that he talks about Mark-1 to journalists as well as the conversations that he attempts to have with Mark-1 are conducive to his attraction to it. For instance, in an interview with online news outlet Quartz (2017), Ma tells Mark-1 that it is "beautiful" and "cute", and he has programmed it to react to these compliments by giggling, winking and expressing gratitude. Ma has also programmed Mark-1 to tell him that it loves him when he asks, "What do you think of Ricky?", and he appears keen to return his own declaration of love to the robot (Quartz 2017). Regardless of whether it is possible to use Mark-1 as a sex aid, Ma has still crafted the robot in a way that is heavily sexualised. The Johansson look-alike robot wears a low-cut cropped top and figure-hugging pencil skirt, exposing its toned midriff. Ma has also applied false nails and eyelashes to it and constructed its feet to look like it is wearing high-heeled shoes. Ma has also crafted its breasts, complete with nipples, in perfect symmetry, perhaps not anatomically accurate but, certainly, anatomically ideal. Further to creating Mark-1 in April 2019, Ma self-published the *DIY Lifelike Robot Book* (Ma 2019), featuring Mark-1 on its cover and offering readers step-by-step instructions on how to 3D print their own version of the robot. Ma set up a crowdfunding campaign for the publication of a manual using website

Indiegogo, which raised almost £40,000 from backers of the project, and the manual now retails online for around £90 (Indiegogo 2017).

Ma's Mark-1 project has a number of problematic implications and demonstrates how science fiction and the media has an influence on our understanding and perception of anthropomorphised technology. Foremost, Ma's work demonstrates the effects of sexually objectifying women, resulting in his creation of a literal object with Johansson's likeness whilst reducing Johansson to the appeal of her physical attractiveness. Moreover, Mark-1 is a gross misappropriation of Johansson's identity, which Ma has plagiarised, exploited and monetised in exchange for notoriety and financial gain. Mark-1 was presented to the world through the media without Johansson's approval or consent, denying the actor agency and authority over her own image and identity. Johansson could legally challenge Ma; however, this does not change the fact that she was declined the opportunity to challenge or prevent the development of Mark-1 at an earlier stage.

Although Mark-1 is not Johansson, its remarkable and uncanny likeness to the actor means that a representation of her is offered, albeit a violating representation that functions to reduce a successful and powerful woman into a vacuous and compliant machine, which offers little except for complimentary remarks intended for, and even predetermined, by its male user. Further to this, Ma's Mark-1 instruction manual is disseminating opportunities for others to possess their own malleable, controllable and compliant artificial version of Johansson. As technology ethicist Blay Whitby asked a journalist for *The Telegraph,* "How would you feel about your ex-boyfriend getting a robot that looked exactly like you, just in order to beat it up every night?" (Jackson Gee 2017). Whilst there is no evidence to suggest that Ricky Ma has enacted violent behaviours towards Mark-1, his creation of this female robot implies retrograde ideas about women as passive and compliant, possibly exposing a desire to manipulate and control. As Sirin Kale (2016) explains for *Dazed,* Mark-1 is incapable of demanding anything "unreasonable" or "reciprocal" from Ma. This, in addition to the Mark-1 manual, draws disturbing parallels with Ira Levin's novel *The Stepford Wives* (1972), in which the women of an idyllic Connecticut neighbourhood are systematically replaced with submissive, perfected versions of themselves by their very own husbands.

Whilst Mark-1 is just one example of female gendered robots in the real-world, it does begin to illustrate the implications of anthropomorphising these technologies, especially creating them in the image of living people, which will only become more problematic when the technology is developed further with the potential to become more widely and readily available. Indeed, the possible democratisation of these technologies is indicated by the emergence of companies dedicated to manufacturing and retailing humanoid, mostly

female sex robots that are customisable to the individual user's wants and needs. The most notable of these companies is RealDoll based in California, which has gone from creating its original "lifelike" silicone sex doll named Harmony to manufacturing a number of dolls with different appearances and identities as well as offering an online build-your-own service and replicas of actual pornographic film actors (RealDoll, no date). RealDoll's CEO, Matt McMullen, is also the CEO of Realbotix, which is using the Harmony doll to develop a robot head powered by an artificial intelligence app that can move and talk, intended as an interchangeable add-on to the silicone sex dolls (Hill 2018). Although relatively rudimentary in terms of their human-like appearance and their programming at present, the continued development and the release of improved models – which suggests a seemingly growing demand for them – are indicative of the artificial intelligence sex robot trajectory and the possibility that they could become increasingly commonplace. Anthropologist Kathleen Richardson, who is also the director of the Campaign Against Sex Robots, argues that these technologies will not only "further sexually objectify women and children" but also "reinforce power relations of inequality and violence" and "reduce human empathy that can only be developed by an experience of mutual relationship" (Richardson 2015b). Science fiction cinema, including Johansson's recent cycle of star vehicle films, could be said to be facilitating the normalisation of these sex technologies through their depictions of the posthuman and often artificial female as conforming to patriarchal standards of beauty and behaviour, and their figuration as sexualised objects. With science fiction cinema, this becomes even more complex and problematic as the posthuman, artificial female becomes conflated with real women who portray her. These fictional narratives should be held accountable for their significant role in the dissemination of discourse around gendered and sexualised technologies.

CONCLUSION

Through the media and contemporary science fiction cinema, Hollywood actor Scarlett Johansson has been figured as an 'ideal' embodiment of the posthuman female. This is because the media has established a cultural perception of Johansson as possessing exceptional attractiveness and extraordinary levels of career success. Media commentaries about Johansson have often attached language to the actor that draws parallels to the lexicon of science fiction and fantasy genre in their figurations of the posthuman. This initiates a connection between Johansson's star persona and the fictional posthuman figure, with both being framed as superlative beings of a different order from baseline humans. Thus, Johansson's qualification for posthuman roles is elevated. The films *Under the Skin* (2013), *Her* (2013), *Lucy* (2014) and *Ghost in the Shell* (2017) even draw upon the 'knownness' of Johansson and her exceptionally attractive body in order to convey the extraordinariness

of their posthuman females.

However, from a feminist viewpoint, Johansson's recurrence as posthuman females in science fiction and the figuration of her as 'ideal' for these roles is problematic for the representation of women. Arguably, this is contributing to a widespread dissemination to the general public of a discourse that is establishing how (post)human females should look and behave, and the normalisation of future technologies that offer performances of gender that are retrograde for women. Further to this, on a superficial level, Johansson's posthuman characters within *Under the Skin* (2013), *Her* (2013), *Lucy* (2014) and *Ghost in the Shell* (2017) seem to have agency; yet closer analysis shows that these characters are sexually objectified, controlled and manipulated by male authorities who are also instrumental in their creations.

As Ricky Ma's development of Johansson's look-alike robot Mark-1 shows, many non-specialist understandings of the future of technology, artificial intelligence and various visions of posthuman figures are influenced by the media and science fiction narratives. Subsequently, the growing consensus is that anthropomorphised technologies are likely to be gendered female as well as attractive and compliant. This is further highlighted by, for example, large technology companies such as Apple, Amazon and Google. These are developing virtual assistants which, although they have ability to provide male voices, have factory settings that are gendered female and, therefore, intrinsic to their identities. It is also underscored by the increasing prevalence of humanoid sex robots that are, mostly, also gendered female. As these technologies develop and become increasingly anthropomorphic, so too will they continue to become more normalised, prevalent and visible in mainstream culture, even more so if discourses around the hegemonic gendering of artificially intelligent technology and posthuman identities continue to be facilitated by the media and science fiction narratives. With women navigating a Western cultural landscape that has seen America's rejection of a female presidential candidate in favour of a conservative misogynist, backlashes towards the #MeToo movement against sexual harassment of women and threats to women's reproductive rights, these fictional and real-world discourses around science, technology and gender seem especially dangerous at this present time.

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